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AUTHOR Waterman, David; And Others
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ABSTRACT

This report examined media audiences for the arts using data gathered in the Survey of Public Participation in the Arts (SPA) covering approximately 18,000 U.S. adults in 1982 and 16,000 adults in 1985. The SPA questionnaire covers the use of television, radio, and recordings as a means to participate in seven particular arts activities, which include jazz music, classical music, opera, musical stage plays or operettas, non-musical stage plays, ballet, and the collections of art museums or galleries. The data showed that well over half of all adults participated in at least one of the seven art forms either through television, radio, or recordings during the past year. Annual reaches of the SPA art forms through media are in most cases several times as great as the reaches of comparable live events or activities. Media audiences for the arts consistently have an average higher income and education level and are more likely to live in urban areas. Residents of non-urbanized areas do not substitute media participation for live participation any more than do residents of urban areas. Overall, the media provides a window to the world of the most talented artists and arts organizations. Tables are used throughout the report to illustrate the findings. Appendices include the SPA questionnaire and the comparative demographic and geographic determinants of arts attendance and media use. (SM)

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PUBLIC PARTICIPATION IN THE ARTS VIA THE MEDIA

Submitted to

The National Endowment for the Arts

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by

David Waterman

Russell Schechter

and

Noshir S. Contractor

Annenberg School of Communications

University of Southern California

Los Angeles, California 90089

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SUMMARY OF MAIN RESULTS

(1) The seven core art forms covered in the SPA data base--jazz, classical music, opera, musical stage plays or operettas, non-musical stage plays, ballet and art collections--annually reach substantial minorities of all U.S. adults via television, radio or recordings, ranging from less than about one in 20 adults in the case of musical and non-musical stage plays on radio, to about one-quarter of adults in the case of classical music on television. Well over half of all adults, approaching 100 million individuals, participated in at least one of the seven art forms via either television, radio or recordings in the past year. Among the three media, television consistently accounts for the largest audience reaches of the arts.

(2) Annual reaches of the SPA art forms via media are in most cases several times as great as the reaches of comparable live events or activities. The greatest such contrasts are for opera and ballet, although for three cases, musical stage plays on radio or recordings and non-musical stage plays on radio, media audience reaches are smaller than their live counterparts.

(3) Media audiences for the arts consistently have on average higher income and especially higher education levels, and are more likely to live in urban areas than the general population of adults. Among the three media, television audiences tend to have somewhat lower education levels and to be older than radio or recording audiences. Among the different art forms, jazz audiences on media are most distinct, containing higher proportions of blacks and younger adults as well as individuals with comparatively lower levels of education and income.

(4) Media audiences generally reflect the same demographic characteristics as live audiences for the same art forms, but to a lesser degree. In nearly all cases, media arts audiences have less extreme income and education levels than do their live counterparts, and they tend to consist of comparatively fewer whites and more females, and to be slightly older on average.

(5) Relatively "intense" users of media to participate in the arts (those who participate in several different art forms via media) tend to have relatively very high income and education levels, are more likely to be white, to be middle-aged and to live in urban areas than are relatively "light" users of media to participate in the arts. This is consistent for all three media.

(6) Media audiences, across different media and across different art forms, heavily overlap with each other, often consisting that is, of many of the same individuals. Similarly, live audiences heavily overlap with media audiences, particularly for the same art forms. Relatively intense users of media to participate in the arts also tend to be relatively intense participants via live events, and vice versa.

(7) In spite of apparently greater availability of the arts in non-urbanized areas via media than through live events and activities (at least in the cases of television and recordings), the SPA data indicate little or no evidence that this results in the substitution of media use for live participation by those who face such barriers. Media participants tend to be as much or in some cases even more urbanized than live participants and no tendency was found for individuals who face geographic barriers to participate more intensively via media than by attending live events and activities.

(8) There was a significant, though apparently mild tendency for media to take the place of live participation by providing lower cost opportunities to potential audiences. This was most evident in the case of television, though statistically questionable in the case of radio and not detectable in the case of recordings. The data suggest a greater tendency for this substitution to occur in the cases of relatively expensive live activities, such as opera or ballet, and least for relatively inexpensive live activities such as visiting art collections.

(9) There was some evidence that individuals of greater age participate via media relatively more intensively than via live attendance, at least in the case of television. There was no direct evidence in the SPA data, however, that media effectively take the place of live participation for those who face physical handicaps, have small children or face other obstacles to live attendance.

(10) Overall, the media provide an obvious window to the world for the most talented artists and arts organizations. There is relatively little evidence, however, that media provide effective substitutes for those who face obstacles to live attendance. The extent to which substitution does occur appears to be overwhelmed by the role of education level as a dominant predictor of participation in the arts via live events and activities as well as via all three media.

I. INTRODUCTION

The electronic media provide a fundamental advance in the technologies of producing and distributing arts and cultural events and activities. The Survey of Public Participation in the Arts (SPA) data base, covering approximately 18,000 U.S. adults in 1982 and 16,000 adults again in 1985, offers us a unique opportunity to better understand the electronic media audiences for these events and activities. The SPA data base provides extensive data on characteristics of media audiences for arts and cultural programs, and also provides data which documents the interrelationship of these media audiences with "live" audiences for the same events and activities.

The scope of this report is defined by the scope of the SPA survey instrument. The questionnaire covers the use of three different media--television, radio and recordings--as means to participate in seven particular arts activities (which we often refer to as the seven "core" art forms): jazz music, classical music, opera, musical stage plays or operettas, non-musical stage plays, ballet and the collections of art museums or galleries. The survey instrument includes many other questions which contribute to our analysis, including queries about live attendance habits for the same set of arts activities, general recreation lifestyles, and extensive demographic and geographic characteristics of the respondents. (A copy of the actual SPA questionnaire is reproduced as Appendix A.)

This report's focus on media audiences for the arts requires us to use only a small portion of the full data base. We benefit, however, from comprehensive but less detailed analyses of both the full 1982 and 1985 SPA surveys already completed by John P. Robinson, Carol A. Keegan, Terry Hanford, Marcia Karth and Timothy A. Triplett of the University of Maryland Survey Research Center (Robinson et al., 1986, Robinson, et all, 1987). We occassionally draw as well on sources outside the SPA surveys, such as the 1982 Census of Business, for supporting economic data.

Our analysis of media audiences in the SPA data base is conducted and presented in the context of a central underlying research question: To what degree do electronic media successfully extend the reach of the arts by permitting individuals to overcome obstacles to attendance at live activities, such as cost or geographic location? A second, related research question we address: Can participation in arts activities via the media be said to be a substitute for attendance at live activites and events?

We caution the reader at the outset that our report cannot offer complete answers to these questions. The detail of data covering media participation in the SPA survey was limited. The insights we can offer are nonetheless relevant to important public policy issues. Public funding heavily supports non-profit productions of arts and cultural programming on public radio and television stations. The commercial recording industries and advertiser-supported radio and television, while primarily unsubsidized, provide income to producing artists and non-profit arts organizations. Effective expenditure of public funds supporting the arts is contingent on accurate understanding of who their ultimate beneficiaries--the audiences--are.

We begin in Section II below with summary statistics documenting the total reach of the arts via media compared to that of comparable live activites. In Section III, we describe media audiences for the arts in terms of their demographic, geographic and other characteristics, and show the degrees of overlap among these audiences. Section IV turns to the interrelationship of media audiences with audiences for live events and activites. In that context, we specifically consider the extent to which the media successfully extend the reach of the arts to those who face barriers to live attendance. In Section V we draw together concluding remarks and offer some speculations.

Preliminary regression results in support of our Section IV text discussion are available to the technically oriented reader as Appendix B of this report. For a discussion of sampling error in the SPA data base and non-technical explanations of other statistical techniques occassionally referred to in this study, we direct the reader to either of the University of Maryland reports.

II. TOTAL AUDIENCE REACH OF THE ARTS ON MEDIA

A summary analysis of the total "reach" of the seven core art forms on recordings, radio and television, with comparative data for "live" activities, appears in Table 1. In each case, the reported statistics indicate how many U.S. adults are estimated to have participated in the activity in question at least once during the past year.

Several points of interest are evident from Table 1.

(1) For each individual art form, in both 1982 and 1985, minorities of all adults participated in the arts via media, ranging up to a maximum of about one-quarter of adults in the cases of classical music and non-musical stage plays on television. To be expected, the combined reaches of two or more media for one art form are larger, reaching a high of 37% for participation in classical music on either television, radio or recordings in both 1982 and 1985. Well over half of all adults, approaching 100 million people in both 1982 and 1985, were projected to participate in at least one art form on at least one of the three media during the course of a year.

A full year is an extremely broad definition of total media reach. It therefore seems safe to assume that these data include virtually everyone with any interest in these art forms. An analysis in the 1986 University of Maryland report (p. 231-235) further suggests that reports of annual live attendance may underestimate actual annual attendance by as much as 20%. It seems likely that a similar tendency to underestimate annual media participation would also prevail. In evaluating the

Table 1
Overall Reach of Arts Activities, U. S. Adults: 1982 and 1985

Activity	Media	1982 Projected Number of Participants	1982 As a Percent of All U.S. Adults	1985 Projected Number of Participants	1985 As a Percent of All U.S. Adults
Jazz	TV	29,788,000	18%	29,002,000	17%
	Radio	29,788,000	18	29,172,000	17
	Recordings	33,244,000	20	31,219,000	18
	Any of the 3 Media	52,170,000	32	50,838,000	30
	Live	16,400,000	10	17,060,000	10
Classical Music	TV	40,650,000	25	42,650,000	25
	Radio	32,750,000	20	37,190,000	22
	Recordings	36,371,000	22	36,849,000	22
	Any of the 3 Media	60,563,000	37	63,122,000	37
	Live	18,040,000	11	22,178,000	13
Opera	TV	19,749,000	12	22,178,000	13
	Radio	11,684,000	7	11,942,000	7
	Recordings	12,178,000	7	13,136,000	8
	Any of the 3 Media	28,636,000	17	30,537,000	18
	Live	3,280,000	2	5,118,000	3
Musical Stage Play or Operetta	TV	33,408,000	20	31,049,000	18
	Radio	7,076,000	4	8,871,000	5
	Recordings	13,824,000	8	13,648,000	8
	Any of the 3 Media	41,802,000	25	38,385,000	23
	Live	31,160,000	19	29,002,000	17
Non-Musical Stage Play	TV	42,624,000	26	38,043,000	22
	Radio	6,253,000	4	6,141,000	4
	Any of the 2 Media	44,599,000	27	39,238,000	23
	Live	18,040,000	11	20,472,000	12
Ballet	TV	26,825,000	16	27,978,000	16
	Live	6,560,000	4	6,824,000	4
Art Collections	TV	37,523,000	23	44,014,000	26
	Live	30,080,000	18	37,532,000	22
Any of the 7 Specified Art Forms	TV	82,616,000	50	82,058,000	48
Any of the 5 Specified Art Forms	Radio	52,993,000	32	52,544,000	31
Any of the 4 Specified Art Forms	Recordings	55,760,000	34	55,103,000	32
Any of the 7 Specified Art Forms	Any of the 3 Media	96,605,000	59	94,853,000	56

data, one must also consider with care the interpretation which adults may make of each question's particular wording. Regardless of any bias or ambiguities that may exist in the SPA data, it is still clear that the absolute numbers of American adults projected to participate in these art forms via the media demonstrate very substantial, numerically important audiences.

(2) In most cases, recorded reaches of the arts via the media are greater than those of the comparable live activities. This is especially true in the case of television.

Table 1 thus provides a preliminary answer to our central research question; the media, especially television, clearly do extend the reach of the arts to new and larger audiences. The contrasts of live vs. media audience reaches appear especially great in the cases of opera and ballet, though slight, or in the opposite direction in the cases of musicals, non-musical plays (on radio) and art collections.

Primary factors affecting the choice between media and live participation for any individual include their relative cost, physical availability and the quality of the arts experience. We consider the impact of these variables in greater detail in Sections IV and V below.

(3) A final point of interest is the consistency of data for the years 1982 and 1985. Year-to-year variations in the percentage of adults participating in the various art forms either via the media or via live activities and events are very minor.

Throughout the rest of this study we consequently report data from only one survey year, 1982. Our reason for selecting the earlier date is the far more detailed analysis those data permit for our purposes. Only in the 1982 survey (during two months, November and December) was the full questionnaire covering not only live attendance but media participation, other recreation habits, etc., asked of all respondents.

III. A DESCRIPTION OF MEDIA AUDIENCES FOR THE ARTS

A. Demographic and Geographic Characteristics

Descriptive data for the radio, television and recording audiences, with comparable data for live audiences and for the overall U.S. adult population, are provided for each of the seven "core" art forms in Table 2. All demographic and geographic breakdowns in this table and throughout the report are presented in terms of percentage frequency distributions, so that the percentages within each section should add to 100% (accounting for rounding error).

Some of the demographic/geographic categorizations we present require comment. First, the reader should note that definitions for "race" in the 1982 data base include adults of Hispanic origin as part of the "white" category. Second, the geographic breakdown (labelled "location") is somewhat crude. Broadly speaking, however, "SMSA, central city" means the repondent lives within the boundaries of a city with a population of 50,000 or greater, "SMSA, not central city" corresponds to suburban areas, and "not in SMSA" generally indicates a rural locale. Finally, we note that much more finely divided category breaks than the three-way schemes we present for education, income and age could be constructed from the 1982 survey data. Finer breaks, however, would make clear comparisons across media and across art forms much more difficult to draw. The reader may find greater demographic detail by age, education and income for both 1982 and 1985 media participants in University of Maryland reports (1986, p.331-2; 1987, p.331-3).

What central points can we make from the ocean of statistics we find in Table 2?

(1) Media audiences compared to the general U.S. population

In every case, media audiences for the arts have on average higher income and especially higher education levels, and are more likely to live in urban areas than the general population. Except for jazz, the proportion of whites is higher for all art forms.

Table 2

Comparative Demographic and Geographic Characteristics of Media and Live Participants 1982

	All U.S. Adults	Jazz				Classical Music			
		TV	Radio	Recording	Live	TV	Radio	Recording	Live
Income									
Less than $10,000	22%	16%	22%	16%	18%	14%	16%	14%	14%
$10,000 to $24,999	41	41	41	42	38	42	38	40	34
$25,000 and over	28	32	28	33	36	35	36	35	43
Not ascertained	8	11	9	10	8	9	11	11	9
Age									
18 - 34	40	48	57	56	67	32	37	40	38
34 - 54	30	30	27	28	23	36	37	35	36
55 and over	30	22	16	16	10	32	27	26	22
Race									
White	87	81	76	78	81	90	88	90	93
Black	11	17	21	19	17	7	8	7	5
Other	2	3	3	3	2	3	3	3	2
Sex									
Male	47	51	53	50	50	45	48	45	41
Female	53	49	47	50	50	55	52	55	59
Education									
Some high school or less	24	10	13	10	7	11	13	10	6
High school graduate or some college	58	60	57	58	57	57	46	51	49
College graduate	18	30	30	31	36	32	41	39	46
Location									
SMSA, central city	27	36	37	39	36	32	37	32	30
SMSA, not central city	40	40	43	41	44	45	42	45	44
Not in SMSA	33	25	21	21	21	22	21	23	25

Table 2 (continued)
Comparative Demographic and Geographic Characteristics of Media and Live Participants
1982

	All U.S. Adults	Non-Musical Stage Play			Ballet		Art Collections	
		TV	Radio	Live	TV	Live	TV	Live
Income								
Less than $10,000	22%	15%	24%	12%	16%	12%	15%	13%
$10,000 to $24,999	41	40	41	33	39	34	38	37
$25,000 and over	28	37	29	47	36	44	39	42
Not ascertained	8	8	6	9	9	10	8	9
Age								
18 - 34	40	41	51	40	34	43	41	46
34 - 54	30	33	29	37	35	36	33	34
55 and over	30	26	20	24	31	21	26	26
Race								
White	87	91	91	93	90	94	88	91%
Black	11	7	8	5	6	4	9	6
Other	2	2	1	2	4	2	3	3
Sex								
Male	47	46	46	43	35	30	48	45
Female	53	54	54	57	65	70	52	55
Education								
Some high school or less	24%	9	10	6	12	4	9	5
High school graduate or some college	58	58	57	49	52	49	60	55
College graduate	18	33	33	46	36	47	31	40
Location								
SMSA, central city	27	33	44	32	34	36	32	31
SMSA, not central city	40	45	38	45	44	48	42	45
Not in SMSA	33	22	18	23	22	16	26	24

Table 2 (continued)

Comparative Demographic and Geographic Characteristics of Media and Live Participants
1982

	All U.S. Adults	Opera				Musical Stage Play			
		TV	Radio	Recording	Live	TV	Radio	Recording	Live
Income									
Less than $10,000	22%	15%	17%	12%	13%	15%	15%	12%	11%
$10,000 to $24,999	41	40	36	40	28	41	36	33	35
$25,000 and over	28	36	34	35	46	36	33	43	46
Not ascertained	8	9	13	14	13	9	16	12	9
Age									
18 - 34	40	24	30	23	32	39	32	34	41
34 - 54	30	38	36	40	38	32	44	44	36
55 and over	30	38	34	37	30	29	24	22	23
Race									
White	87	88	88	92	93	89	85	95	93
Black	11	8	8	5	5	9	11	2	6
Other	2	4	4	3	2	2	4	3	2
Sex									
Male	47	41	48	45	42	44	50	41	42
Female	53	59	52	55	58	56	50	59	58
Education									
Some high school or less	24	12	14	10	4	11	11	6	7
High school graduate or some college	58	56	46	50	49	59	46	44	54
College graduate	18	32	40	40	47	30	43	50	39
Location									
SMSA, central city	27	35	41	32	35	36	39	33	37
SMSA, not central city	40	45	46	52	50	43	46	52	48
Not in SMSA	33	20	14	16	15	21	16	16	22

(2) Comparisons among media audiences

While the above patterns are consistent for all three survey media, television audiences tend to have somewhat lower education levels and to be older than radio and recording audiences. Radio audiences are generally somewhat more urban, consistently more so than are television audiences.

In comparing media audiences for the different art forms, we see that distributions are fairly consistent by sex, though at the extremes, ballet attracts relatively larger proportions of women, and jazz relatively more men. Results by age are mixed, though opera audiences are notably older and jazz audiences younger. Overall, media audiences for jazz are most distinct, containing higher proportions of blacks and younger people as well as individuals with slightly lower levels of education and income than audiences for the other survey art forms.

(3) Media audiences compared with live audiences

In general, media audiences reflect the same demographic and geographic characteristics as live audiences for the same art form, but to a lesser degree. In nearly all cases, media arts audiences have less extreme income and education levels than do their live counterparts, and they tend to consist of comparatively fewer whites, more females and they are slightly older on average. Differences by geographic location appear largely insignificant.

The main exceptions to these patterns are those three media audiences that are smaller than their live counterparts, namely musical stage plays on recordings and radio and non-musical stage plays on radio; these audiences generally have comparatively more extreme demographic characteristics. A possible explanation is that performances of these two art forms on audio media appeal strongly mainly to those with relatively intense interest in theater, and that such individuals tend to have the more extreme demographics generally characteristic of live audiences. In fact, it is useful to recognize that the larger are the reported arts audiences in size,

whether particiating live or via the media, the less extreme tend to be the income, education and other demographic differences when contrasted with the general U.S. population.

The demographic and geographic contrasts among live vs. media audiences are a subject of further consideration in Section IV below. At this point we turn to a closer consideration of the media audiences themselves.

B. Overlaps Among Media Audiences

The demographic and geographic similarities among arts audiences revealed above suggest that to a large extent they may consist of the same individuals. To what degree do these media audiences in fact overlap with each other? The most basic way to address this question is the correlation matrix, shown in Table 3 below.

The "correlation coefficients" in the Table 3 matrix record the degrees of positive or negative association, measured from -1.000 to +1.000 among the various media activities. To what extent, for example, do people who listen to opera on recordings also watch opera on television? The coefficient of +.372 recorded for this case is relatively high by statistical standards, and is typical of the correlations of media use within the same art forms as measured by the SPA survey. That is, adults who reported listening to opera music on recordings have a relatively strong tendency to watch opera on television as well. A zero association would show that there is no particular relationship between the two activities at all, while a negative value would indicate that people with a tendency to engage in one activity have a tendency to NOT engage in the other. Note that there is at least some positive association among ALL of the specific media activities, but that correlations among audiences for different media within the same art forms tend to be somewhat greater. (These "within art form" coefficients are printed in bold type in Table 3.)

Table 3
Correlation Matrix: Arts Participants via Media*

	Jazz on TV	Jazz on Radio	Jazz on Record-ings	Classical Music on TV	Classical Music on Radio	Classical Music on Record-ings	Opera on TV	Opera on Radio	Opera on Record-ings	Musical Play on TV	Musical Play on Radio	Musical Play on Record-ings	Non-Musical Play on TV	Non-Musical Play on Radio	Ballet on TV	Art Collec-tion on TV
Jazz on TV	1.000															
Jazz on Radio	***.389***	1.000														
Jazz on Recordings	***.451***	***.549***	1.000													
Classical Music on TV	.311	.202	.202	1.000												
Classical Music on Radio	.233	.322	.253	***.431***	1.000											
Classical Music on Recordings	.225	.240	.338	***.474***	***.494***	1.000										
Opera on TV	.203	.138	.108	.483	.322	.319	1.000									
Opera on Radio	.115	.171	.131	.280	.440	.330	***.356***	1.000								
Opera on Recording	.122	.110	.148	.313	.335	.439	***.372***	***.440***	1.000							
Musical Stage Play on TV	.282	.151	.174	.421	.290	.271	.377	.219	.235	1.000						
Musical Stage Play on Radio	.124	.143	.113	.215	.302	.256	.242	.445	.264	***.220***	1.000					
Musical Stage Play on Recordings	.128	.131	.180	.274	.303	.400	.230	.241	.411	***.262***	***.307***	1.000				
Non-Musical Stage Play on TV	.327	.201	.267	.388	.312	.325	.275	.196	.217	.440	.171	***.263***	1.000			
Non-Musical Stage Play on Radio	.108	.124	.131	.132	.205	.179	.110	.169	.110	.123	.229	***.137***	.211	1.000		
Ballet on TV	.243	.201	.197	.458	.330	.381	.442	.275	.300	.360	.186	.282	.362	.151	1.000	
Art Collection on TV	.294	.213	.244	.382	.280	.333	.317	.160	.192	.333	.193	.205	.376	.159	.374	1.00

* All coefficients are significantly different from zero at the 95% confidence level.

A second, more powerful approach to understanding audience overlaps is to construct "indices" of media participation. It may seem that the question "Have you [participated in ...] at least once during the past year?" is very restrictive. We can greatly enrich the data base, however, by counting the number of different media that an individual used to participate in each art form, or by counting the number of different art forms that an individual participated in via each individual medium. Such indices will permit us to look systematically at the degrees of overlap among the various media audiences, and will allow us to draw inferences about relatively "light" vs. relatively "intense" users of media to participate in the arts.

The relatively high degrees of overlap among users of different media for the same art form are indicated by Table 4. Among the 17% of adults who participated in opera via media, for example, more than half (10% of all adults) used only one of the media, nearly a third (5% of all adults) used at least two media, and about one in eight (2% of all adults) used all three of the media in the survey.

We can also construct what we label in Table 5 as "indices of diversity" of media use, which count the number of different art forms in which individuals participated using the same medium. The first three sections of Table 5 show the distribution of U.S. adults into index categories for television, radio and recordings. Ten percent of U.S. adults, for example, reported participation in five or more different art forms via television in the past year. The final section of Table 5, labelled "All Media," is a summary index measuring the percentage of adults who participated in up to all 16 of the possible art form/media combinations in the survey. A sacrifice in using diversity indices is of course that we lose distinctions among different art forms. The positive correlations between each media arts activity with all of the others, however, suggests that constructing such indices is nevertheless meaningful[1].

To what extent can we expect these diversity indices to proxy for a sorely missed set of data items not in the SPA survey, namely the intensity of media use, or the

Table 4

Indices of Media Use by Art Form
1982

Index	Jazz	Classical Music	Opera	Musical Stage Play/Operetta	Non-musical* Stage Play
0	68%	63%	83%	75%	73%
1	14	16	10	19	24
2	11	12	5	5	3
3	7	9	2	2	-
Total	100%	100%	100%	100%	100%

* Only two media, television and radio, were included in the questionnaire for non-musical stage plays.

Table 5

Indices of Art Form Diversity by Type of Media
1982

Television		Radio		Recordings		All Three Media	
Index	Percent of U.S. Adults	Index	Percent of U.S. Adults	Index	Percent of U.S. Adults	Index	Percent of U.S. Adults
0	50%	0	68%	0	66%	0	42%
1-2	26	1-2	26	1-2	28	1-4	36
3-4	15	3-5	5	3-4	6	5-8	16
5-7	10					9-16	7
TotalL	100%		100%		100%		100%

frequency with which individuals repeatedly used a given medium to participate in the arts during the past year? It is intuitively appealing that individuals who report using the media to participate in a relatively wide variety of art forms are likely to participate in each one of these art forms relatively frequently. Statistical indications from our analysis give us further confidence that these diversity indices are in fact useful proxies for intensity of use. First, data directly measuring both the diversity of art form participation and the frequency of participation in each art form are available for "live" activities. We constructed a diversity index of live activity participation, ranging from 0 to 7 for each of the seven "core" art forms, and correlated it with a "frequency" index of live activity participation; this frequency index ranged from 0 to 35, where for all seven art forms, one point is earned for one attendance in the past year, two points for one attendance in the past month, and three, four and five points respectively, for attendance of two, three and four or more times in the past month. The correlation between these two indices was extremely high, +.920, showing that the 0-7 diversity index for live arts participation is a reliable proxy for the overall frequency of live arts attendance. The relationship of art form diversity to intensity of use could of course be different for media participation than for live participation. The parallels in demographic and geographic characteristics between live and media audiences as discussed above, however, suggest this to be very unlikely.

C. Characteristics of Media Audiences by Intensity of Use

The demographic and geographic characteristics, and also the general recreation habits, of media participants according to their diversity of art form participation are compared in Tables 6 through 9. The tendency for relatively "intense" media user groups to have higher incomes and more education, to live in urban areas and to have a greater proportion of whites among them, is put into sharp relief. High diversity media participants also lead relatively active lives despite the generally

Table 6

Detailed Characteristics of Arts Participants via Television: 1982

	Index Categories			
	0 (50%)	1-2 (26%)	3-4 (15%)	5-7 (10%)
Income				
Less than $10,000	30%	20%	14%	12%
$10,000 to $24,999	42	41	42	39
$25,000 and over	19	31	34	40
Not ascertained	9	7	10	9
Age				
18 - 34	39%	47%	43%	28%
34 - 54	29	28	34	37
55 and over	31	25	24	35
Race				
White	86%	88%	86%	90%
Black	12	11	11	7
Other	2	2	3	3
Sex				
Male	49%	48%	43%	43%
Female	52	52	57	57
Education				
Some high school or less	36%	16%	10%	8%
High school graduate or some college	55	63	59	52
College graduate	9	20	31	40
Location				
SMSA, central city	25%	29%	33%	37%
SMSA, not central city	37	42	43	44
Not in SMSA	38	29	24	19
General Recreation Habits				
Average TV hours viewed per day	3.3	3.2	3.1	3.5
Percent attending a movie in past year	52.8%	71.2%	75.3%	78.2%
Percent attending a sports event in past year	39.0%	59.2%	59.5%	57.8%
Overall recreation index	5.2	7.7	8.6	8.6

( ): Indicates percent of total U.S. adults included.

Table 7

Detailed Characteristics of Arts Participants via Radio: 1982

	Index Categories		
	0 (68%)	1-2 (26%)	3-5 (6%)
Income			
Less than $10,000	26%	19%	18%
$10,000 to $24,999	43	39	38
$25,000 and over	23	32	33
Not ascertained	8	10	11
Age			
18 - 34	38%	46%	40%
34 - 55	30	29	40
55 and over	32	25	20
Race			
White	89%	82%	88%
Black	9	14	10
Other	2	4	3
Sex			
Male	46%	49%	50%
Female	54	51	50
Education			
Some high school or less	29%	15%	10%
High school graduate or some college	59	57	42
College graduate	12	28	48
Location			
SMSA, central city	25%	33%	47%
SMSA, not central city	38	44	39
Not in SMSA	37	23	15
General Recreation Habits			
Average TV hours viewed per day	3.4	3.2	2.6
Percent attending a movie in past year	57.8%	75.8%	77.0%
Percent attending a sports event in past year	45.3%	57.9%	60.0%
Overall recreation index	6.0	8.1	8.6

( ): Indicates percent of total U.S. adults included.

Table 8

Detailed Characteristics of Arts Participants via Recordings: 1982

	Index Categories		
	0 (66%)	1-2 (28%)	3-4 (7%)
Income			
Less than $10,000	28%	15%	12%
$10,000 to $24,999	42	41	38
$25,000 and over	22	35	36
Not ascertained	8	9	14
Age			
18 - 34	37%	50%	31%
34 - 54	30	30	40
55 and over	33	20	29
Race			
White	88%	83%	92%
Black	10	14	6
Other	2	3	2
Sex			
Male	47%	49%	41%
Female	53	51	59
Education			
Some high school or less	31%	10%	8%
High school graduate or some college	58	60	43
College graduate	11	30	48
Location			
SMSA, central city	25%	33%	33%
SMSA, not central city	38	42	51
Not in SMSA	37	25	15
General Recreation Habits			
Average TV hours viewed per day	3.4	3.1	2.3
Percent attending a movie in past year	55.9%	79.3%	78.9%
Percent attending a sports event in past year	43.2%	62.3%	61.5%
Overall recreation index	5.8	8.5	8.8

( ): Indicates percent of total U.S. adults included.

Table 9

Detailed Characteristics of Arts Participants via All Media: 1982

	Index Categories			
	0 (41%)	1-4 (36%)	5-8 (16%)	9-16 (7%)
Income				
Less than $10,000	31%	21%	14%	12%
$10,000 to $24,999	43	40	40	39
$25,000 and over	17	31	37	38
Not ascertained	9	8	9	11
Age				
18 - 34	36%	46%	39%	30%
34 - 54	30	28	33	40
55 and over	34	26	27	30
Race				
White	87%	88%	87%	93%
Black	11	9	9	5
Other	2	3	4	2
Sex				
Male	49%	43%	43%	43%
Female	51	57	57	57
Education				
Some high school or less	38%	18%	9%	6%
High school graduate or some college	55	64	58	42
College graduate	7	18	33	52
Location				
SMSA, central city	23%	28%	34%	37%
SMSA, not central city	36	42	46	48
Not in SMSA	41	30	20	15
General Recreation Habits				
Average TV hours viewed per day	3.4	3.1	2.7	2.5
Percent attending a movie in past year	49.2%	69.8%	76.6%	83.6%
Percent attending a sports event in past year	37.6%	55.3%	58.4%	65.2%
Overall recreation index	4.9	7.5	8.6	9.1

( ): Indicates percent of total U.S. adults included.

sedentary nature of media activities. (The "Overall Recreation Index" measures the number of general recreation activities, out of 14 possibilities presented in questions 11a - 11n on the questionnaire, which respondents reported participating in at least once during the past year, including movies and sports events.) Notice also that the proportions of both the youngest and oldest age groups tend to decline as media participation increases.

It is particularly interesting, perhaps, to consider the characteristics and habits of the 6 to 10% of adults who fit into the highest diversity categories we have defined in Tables 6 - 9. These groups make up small proportions of all adults who are reached by the arts via the media. To the extent that high diversity of art form participation via the media also indicates high frequency of use, however, we can assume that these individuals make up disproportionately large fractions of the typical audience for a television, radio or recorded program. These most intense users of media are composed of the highest income, most educated and most urbanized individuals, and they show the highest overall degrees of participation in other recreational activities.

We conclude this section with a final observation about the conventional wisdom that arts audiences, including those who watch the arts on television, tend to be light television viewers in general, shunning typical commercial TV fare. We do not have data for the general television viewing habits of live arts attenders. Tables 9 and 10, however, appear to confirm this notion in the case of arts participants via recordings and radio; the survey samples of more intense users of these media for the arts report progressively lower average hours of daily television viewing[2]. The results appear less distinct in the case of arts participants via television itself; there is not a clear relationship between intensity of television use for the arts and overal viewing hours[3]. However, this latter result still supports the conventional wisdom in part. If heavy users of television spent the same

Table 10

Correlation Matrix: Arts Participants via Media with Live Participants*

	Jazz Attendance	Classical Music Attendance	Opera Attendance	Musical Plays Attendance	Non-Musical Plays Attendance	Ballet Attendance	Art Collections Attendance
Jazz on TV	***.261***	.193	.067	.179	.084	.129	.234
Jazz on Radio	***.354***	.235	.145	.197	.191	.141	.253
Jazz on Recordings	***.379***	.235	.121	.210	.184	.157	.282
Classical Music on TV	.137	***.362***	.163	.305	.223	.189	.353
Classical Music on Radio	.185	***.382***	.220	.238	.254	.211	.374
Classical Music on Recordings	.218	***.399***	.150	.244	.287	.193	.375
Opera on TV	.082	.260	***.207***	.176	.191	.132	.268
Opera on Radio	.064	.258	***.266***	.145	.135	.142	.264
Opera on Recordings	.103	.243	***.272***	.178	.194	.179	.274
Musical Stage Play on TV	.102	.224	.151	***.279***	.199	.146	.233
Musical Stage Play on Radio	.100	.229	.201	***.188***	.144	.163	.181
Musical Stage Play on Recordings	.177	.314	.147	***.304***	.266	.230	.269
Non-Musical Stage Play on TV	.188	.299	.166	.304	***.274***	.197	.338
Non-Musical Stage Play on Radio	.118	.169	.205	.148	***.136***	.144	.193
Ballet on TV	.149	.285	.173	.210	.197	***.240***	.309
Art Collections on TV	.150	.218	.139	.176	.160	.141	***.294***

*All coefficients are significantly different from zero at the 95% confidence level.

proportion of their hours in front of the set watching the arts as do light users of television, we would expect the arts diversity index for television to rise sharply among heavy television viewers. The fact that we observe a relatively steady number of TV hours watched as the diversity index increases, however, suggests that heavy television users in general tend to spend relatively smaller proportions of their viewing hours watching the arts.

IV. INTERRELATIONSHIPS OF MEDIA WITH LIVE AUDIENCES

A. Media and Live Audience Overlaps

We now look specifically at how media audiences for arts events and activities overlap with live audiences. In that context, we discuss possible explanations for some of the size, demographic and geographic comparisons we drew between media and live arts audiences in previous sections. The similar, though generally less extreme demographic characteristics which media audiences have in common with live arts audiences again suggests that they may in large part be the same individuals. The SPA data confirm that this is indeed the case.

Correlations between all the surveyed media activities and live attendance at the seven core art forms appear in Table 10. Again all are positive, showing that participation in any one activity via the media increases the probability that this individual will also be a live attender, and vice versa. These relationships tend to be especially strong among audiences for the same art form via different media.

The data of Table 11 more specifically describe overlaps of media and live audiences for the same art forms. As a comparison of these data with Table 1 above will show, the media participation rates among live attenders are typically several times higher than those of the general population of adults. In the more extreme case of opera, for example, 57% of those reporting live attendance in the past year also used television, almost five times the 12% rate of opera participation via

Table 11

Media Participation by Live Attenders
1982

	The percent of live attenders who ALSO participated in the same art form during the past year via:		
	Television	Radio	Recordings
Jazz	51%	57%	65%
Classical Music	63	55	66
Opera	57	48	48
Musical Stage Play or Operetta	44	8	24
Non-musical Stage Play	57	11	–
Ballet	59	–	–
Art Collections	48	–	–

television reported by all adults. These data thus confirm the high degree to which live attenders are a subset of the adults who use media to participate.

Because arts participants via media are generally more numerous than live attenders via the media, we would expect smaller proportions of those media audiences to also report live attendance. The data of Table 12 confirms this to be the case. Between 10% to about half of media participants also reported live attendance for the same art form. A comparison with Table 1 will again show, however, that these participation rates are typically several fold greater than the live participation rates reported for all adults.

Our initial picture of overlaps between live and media attenders is completed by Table 13. Individuals who reported relatively intense participation in different art forms via the media clearly tended to be far more avid participants in live events than those with little or no media participation. This strongly suggests that individuals with high frequencies of media use for the arts also tend to have high frequencies of attendance.

Of particular interest, perhaps, are not those individuals who both use media and attend live events, but the roughly half to 90% of media participants which Table 14 show to have reported no live attendance in the past year. We might label these groups as the "new" audiences to which media extend the reach of the arts.

What are the characteristics of these "new" audiences? Tables 15, 16 and 17 break down the basic geographic and demographic characteristics and report the recreation habits of overlap and non-overlap audiences in terms of our "index" data for each of the three media. As we would expect, those who participated both live and via the media have the highest income and education levels, are composed of the most whites and urban dwellers, and are the most active. Those who participated only via the media do, however, have somewhat more education and income, have a higher proportion of whites, have more older members and appear

Table 12

Live Attendance by Media Participants
1982

	The percent of media participants who ALSO participated live in the same art form at least once in the past year:		
	Television Participants	Radio Participants	Recordings Participants
Jazz	28%	32%	33%
Classical Music	29	33	35
Opera	10	16	14
Musical Stage Play or Operetta	40	38	52
Non-musical Stage Play	25	31	–
Ballet	15	–	–
Art Collections	46	–	–

Table 13

Live Attendance by Indices of Media Participation
1982

	Index	Avg. number of different live activities attended*	% who attended at least one live activity*	% who attended at least three live activities*
Television:				
	0	.3	18%	5%
	1-2	.8	46	15
	3-4	1.5	66	33
	5-7	2.2	78	50
Radio:				
	0	.5	27%	8%
	1-2	1.4	59	29
	3-5	2.5	77	56
Recordings:				
	0	.4	25%	6%
	1-2	1.4	61	30
	3-4	2.5	79	56

* in the past year

Table 14

Media Participants Who are Non-Live Attenders 1982

	The percent of media participants who did NOT participate live in the same art form at least once in the past year:		
	Television Participants	Radio Participants	Recordings Participants
Jazz	71%	68%	66%
Classical Music	71	67	65
Opera	90	83	86
Musical Stage Play or Operetta	60	62	48
Non-musical Stage Play	75	67	-
Ballet	85	-	-
Art Collections	53	-	-

Table 15

Characteristics of Media and Live Overlap Audiences: Television 1982

Participated Live[1]: / Participated via Television[2]:	Yes / Yes	Yes / No	No / Yes	No / No
Income				
Less than $10,000	14%	15%	21%	34%
$10,000 to $24,999	38	41	45	43
$25,000 and over	38	32	27	15
Not ascertained	10	12	7	9
Age				
18 - 34	43%	49%	41%	37%
34 - 54	32	31	30	29
55 and over	25	20	29	34
Race				
White	89%	91%	85%	85%
Black	9	7	12	13
Other	2	2	3	2
Sex				
Male	45%	42%	47%	50%
Female	55	58	53	50
Education				
Some high school or less	7%	12%	21%	41%
High school graduate or some college	56	67	68	53
College graduate	37	21	11	7
Location				
SMSA, central city	36%	25%	26%	25%
SMSA, not central city	43	47	42	35
Not in SMSA	21	28	32	40
General Recreation Habits				
Average TV hours viewed per day	3.1	2.4	3.5	3.5
Percent attending a movie in past year	84.0%	78.0%	60.0%	47.0%
Percent attending a sports event in past year	66.0%	63.0%	49.0%	35.0%
Overall recreation index	9.0	7.7	6.9	4.6

1. Participated in at least one live art form or activity in the past year.
2. Participated in at least one art form or activity via television in the past year

Table 16

Characteristics of Media and Live Overlap Audiences: Radio 1982

Participated Live[1]: / Participated via Radio[2]:	Yes / Yes	Yes / No	No / Yes	No / No
Income				
Less than $10,000	17%	13%	24%	31%
$10,000 to $24,999	42	41	41	44
$25,000 and over	31	37	26	18
Not ascertained	10	10	9	7
Age				
18 - 34	42%	42%	42%	37%
34 - 54	34	33	29	29
55 and over	24	26	29	34
Race				
White	88%	93%	82%	87%
Black	10	5	12	11
Other	2	2	6	2
Sex				
Male	44%	41%	53%	48%
Female	56	59	47	52
Education				
Some high school or less	7%	10%	24%	36%
High school graduate or some college	53	65	60	57
College graduate	40	25	16	7
Location				
SMSA, central city	34%	30%	30%	23%
SMSA, not central city	44	44	41	36
Not in SMSA	22	26	29	41
General Recreation Habits				
Average TV hours viewed per day	2.6	2.7	2.9	3.3
Percent attending a movie in past year	85.0%	79.0%	61.0%	49.0%
Percent attending a sports event in past year	66.0%	64.0%	44.0%	37.0%
Overall recreation index	9.1	8.1	6.7	5.1

1. Participated in at least one live art form or activity in the past year.
2. Participated in at least one art form or activity via Radio in the past year

Table 17

Characteristics of Media and Live Overlap Audiences: Recordings 1982

Participated Live[1]: / Participated via Recordings[2]:	Yes / Yes	Yes / No	No / Yes	No / No
Income				
Less than $10,000	17%	15%	17%	29%
$10,000 to $24,999	36	40	46	45
$25,000 and over	38	35	28	16
Not ascertained	10	9	9	10
Age				
18 - 34	42%	40%	46%	35%
34 - 54	34	31	31	29
55 and over	24	28	23	36
Race				
White	88%	94%	85%	91%
Black	10	4	11	8
Other	2	2	4	2
Sex				
Male	44%	44%	51%	48%
Female	56	56	49	52
Education				
Some high school or less	7%	11%	20%	38%
High school graduate or some college	53	68	63	54
College graduate	40	21	17	8
Location				
SMSA, central city	34%	30%	25%	25%
SMSA, not central city	44	47	44	39
Not in SMSA	22	23	31	36
General Recreation Habits				
Average TV hours viewed per day	2.6	2.8	2.8	3.0
Percent attending a movie in past year	85.0%	82.0%	65.0%	48.0%
Percent attending a sports event in past year	66.0%	72.0%	48.0%	38.0%
Overall recreation index	9.1	8.1	7.2	5.3

1. Participated in at least one live art form or activity in the past year.
2. Participated in at least one art form or activity via recordings in the past year

to be generally more active than the group which reported no participation in the arts via either media or live activites. Finally, the high correspondence between the general rate of media participation and live participation reported in Table 13 above suggests that these "new" audiences are relatively light users of the media to participate in the arts.

B. Extending the Reach of the Arts

At this point, we can more systematically consider our central research question: Do media successfully extend the reach of the arts to those who face obstacles to live attendance? The media, for example, might serve as a substitute for those who have low incomes, live in remote geographic locations, or have physical handicaps which preclude them from attending live events as much as they would like[4].

In an obvious sense, of course, the answer to this question is a resounding yes; the media are windows to the world for many artists and arts organizations. A performance of "Live from Lincoln Center" on public television might attract 5,000,000 viewers nationwide, far more than could fit into Lincoln Center in an entire season of concerts, and most of whom have no practical means to attend anyway. Performances and visual arts collections from the most admired and talented artists in the world are steadily supplied via television, radio and recordings and in most cases attract audiences far larger than do their live counterparts.

For a more complete answer to our central question, however, it remains useful to consider the question of "substitutability" of media for live events in terms of an economic model of consumer behavior. In this model, products are said to be substitutes if a fall in the price or an increase in the availability or quality of one leads to a significant <u>decrease</u> in the consumption or use of the other, and vice versa. Butter and margarine are the classic textbook examples. Products are said to be complementary, on the other hand, if a fall in price or an <u>increase</u> in the

availability or quality of one induces an increase in the consumption or use of the other. Bread and butter, since they are often used together, represent the classic example of complementary products.

In terms of the arts, interested individuals might be thought of as choosing among live performances and alternative media vehicles on the basis of three factors: their physical availability, how much they cost (in terms of both time and money), and the quality of experience they provide. We observed above a very strong tendency for participants in the arts via the media to also participate via live events or activities. What this demonstrates, however, is only that some individuals have high general interest in the arts and others low general interest. It does not in itself suggest either complementarity or substitutability of media with live events. In order to determine the degree to which the arts via media are good substitutes for live events and activities, we would have to consider the relative proportions by which different individuals use media vs. attend live events. If, for example, a classical music concert on television is a partial substitute in the economic sense for a live concert, then we would expect those who enjoy classical music but do not have live events accessible to them to watch television concerts more frequently than those who have live events readily accessible. In terms of our central research question, a finding that this is the case would support the conclusion that the media do in fact serve to overcome barriers to live attendance at classical music concerts.

The SPA data base unfortunately permits us to draw only the most tentative conclusions to this critical question. The data nevertheless reveal useful outlines of the answers.

1. Geographic Obstacles

To what extent are individuals without convenient access to live arts events able to fulfill their desires to participate via the media? Census of Business data from 1982 in Tables 18 and 19 establish this as a viable hypothesis; they show a very

Table 18

Geographic Distribution of Arts Organizations by Number of Organizations Major Regions and Selected States: 1982

	U.S. Population	Producers of Live Theater (1588)	Ballet Companies (62)	Modern/ Folk/Ethnic, Other Dance Companies (239)	Symphony Orchestras, including Chamber Music Organizations (406)	Opera Companies (78)	Jazz Music Organizations & Artists (145)
Northeast	**21%**	**36%**	**32%**	**31%**	**25%**	**27%**	**19%**
New York	8	24	18	22	17	14	10
Pennsylvania	5	4	3	3	4	4	4
North Central	**25**	**18**	**24**	**22**	**23**	**18**	**27**
Illinois	5	4	2	2	4	1	6
South	**34**	**21**	**20**	**18**	**25**	**31**	**17**
Florida	5	4	6	3	4	6	1
Texas	7	4	3	5	3	4	5
West	**20**	**25**	**23**	**28**	**26**	**24**	**36**
California	11	17	16	18	11	8	23
Total	100%	100%	100%	100%	100%	100%	100%

( ): Indicates number of companies reporting

Source: U.S. Commerce Dept., Bureau of the Census, Census of Business, 1982; special tabulation for the National Endowment for the Arts.

Table 19

Geographic Distribution of Arts Organizations by Total Revenue: Major Regions and Selected States: 1982

	Producers of Live Theater ($1,120)	Modern/ Folk/Ethnic, Other Dance Companies ($116)	Symphony Orchestras & Opera Companies, Including Chamber Music Organizations ($495)
Northeast	**51%**	**49%**	**29%**
New York	45	34	17
Pennsylvania	n.a.	n.a.	n.a.
North Central	**14**	**13**	**25**
Illinois	n.a.	n.a.	n.a.
South	**16**	**8**	**19**
Florida	n.a.	n.a.	n.a.
Texas	n.a.	n.a.	n.a.
West	**18**	**30**	**26**
California	13	24	11
Total	100%	100%	100%

( ): Indicates total reported revenues in millions of dollars.

Source: U.S. Commerce Dept., Bureau of the Census, Census of Business, 1982; special tabulation for the National Endowment for the Arts

substantial skew in terms of numbers of organizations, and even more so in terms of total revenues, of performing arts organizations in states such as New York and California which have very large cities. These geographic contrasts are generally consistent from art form to art form, and reflect the economic reality that a large local population base is often necessary to support high quality arts activities. Comparable data for art museums were not available, but it seems evident that the largest U.S. cities have a disproportionate share of art museums both in number and in terms of quality of their exhibitions. Performing arts organizations and art collections do tour around the country. Available data suggest, however, that the actual extent of this touring is relatively minor. Symphony orchestras, for example, earned only 4.1% of their total performance income in 1985 from performances outside their home metropolitan area (American Symphony Orchestra League, 1986); non-profit resident theaters earned only 4.2% of their total earned income from touring in 1986 (Holley, 1987). In any case, we can expect touring to provide relatively little artistic nourishment to non-urbanized areas because facilities to house touring professional organizations or art collections are usually unavailable.

Some artists and arts organizations, at least of an amateur nature, do of course provide performances and exhibitions in non-urbanized areas. The data of Table 20, however, confirm that residents of rural areas who say they would like to participate in live activites and events more often are in fact far more likely to perceive the unavailability of these live activities and events as an obstacle to doing so.

To what extent do the media provide substitutes for live attendance among those who face these barriers? The available data suggest that on the whole they do so only to a very minor extent. Table 21, for example, shows that among those who desire to attend live events and activities more often, people who perceive the physical unavailability of these events and activities are no more likely to use media

Table 20

Percent of All Adults Who Cite "Not Available" as a Barrier to More Attendance 1982

Base: Those Who Desire to Attend More

	SMSA, Central City	SMSA, Non-Central City	Not in SMSA
Jazz	14%	17%	44%
Classical Music	11	13	46
Opera	13	21	47
Musical Stage Play	13	12	46
Non-Musical Stage Play	10	14	40
Ballet	21	18	50
Art Collections	11	13	46

Table 21

Media Participation: All Adults Compared to Those Who Cite "Not Available" as a Barrier

Base: All Adults Who Desire to Attend More

Activity	Total Percent Who Participate via Media	Total Percent Who Participate via Media AND Cite "Not Available" as a Barrier
Television		
Jazz	45%	43%
Classical Music	55	52
Opera	54	52
Musical Stage Play	38	36
Non-Musical Stage Play	45	43
Ballet	56	59
Art Collections	44	42
Radio		
Jazz	52	51
Classical Music	49	40
Opera	31	23
Musical Stage Play	6	5
Non-Musical Stage Play	7	8
Records		
Jazz	56	58
Classical Music	55	53
Opera	36	33
Musical Stage Play	18	18

than those who do not perceive their unavailability as a barrier. This is perhaps not surprising in light of the Table 2 data above, which showed that arts participants via the media were just as likely, in some cases more likely, to live in urban areas than those who participate via live events and activities.

The presence of any tendency for wider geographic availability of the arts via television radio or recordings to compensate for geographic barriers to live attendance was in fact undetectable from the regression analysis we report in Appendix B. The degree of urbanization was found to be an equally significant determinant of both media use and live attendance and we found no tendency for less urbanized residents to participate relatively more frequently via media than by attending live events.

How can we explain these findings? One possibility is that the media are also relatively inaccessible to non-urbanized residents. At least for radio, this is probably true. Only relatively large cities are able to support an exclusively classical music or jazz radio station, for example, and many rural residents probably can find very little if any of the SPA art forms on radio. For recordings and television, the any reduction in accessability outside urban areas seems relatively minor. Recordings can of course be played in any location, though the availability of software collections only by travel or mail order may be a hindrance. A steady supply of arts and cultural programming is reportedly available on public television at the flip of a switch to 98% of television households, though poor reception may be an obstacle both in rural and urban areas.[5]

Two other explanations seem more likely. One is that those with an interest in arts events and activities have a strong tendency to live in urban areas where these events and activities are more accessible. Complementing this tendency are the effects which steady exposure to the live arts, and also to educational programs concerning the arts, are likely to have on one's recreational interests.

A second part of the explanation may be that people generally do not consider the media to be acceptable substitutes for live events and activities, and therefore do not turn to them as alternatives. Some insight into this posibility comes from considering other potential obstacles to live participation.

2. Cost as an Obstacle

An important barrier to participation in live events and activities is often, of course, the cost of admission. Tickets to live performances by professional opera and ballet companies, for example, are far beyond the means of many individuals. Non-profit resident theater, professional symphony orchestra, and jazz performances are probably somewhat more accessible in price. The main exception among the surveyed art forms is visual art collections; even the most glorious exhibitions of the visual arts are often available for free or for a nominal fee.

Among the media, television and radio broadcasts are of course free and set penetrations are virtually universal.[6] Recordings, of course, require purchase, and the hi-fi equipment on which to play them can be very expensive. Given the equipment investment, however, a recording of the finest performance can usually be purchased for less than the price of admission to the recorded event.

Given these rough assumptions about relative costs, we would expect media to lower the cost barriers to arts participation. To a mild degree, our statistical tests reported in Appendix B support this expectation. Income levels were not found to present significant barriers to participation via either television or radio, but they appear to do so in the case of participation via recordings as well as live events. We might also expect to observe substitution of media for live participation by those with lower income levels, at least for the performing arts, and at least for television and radio. Our results did also verify this tendency in the case of television, but it was questionable for radio and not detectable for recordings. The existence of some of these "income substitution effects" is also suggested by inspection of Table 2.

There is a noticably milder skew in income levels among live participants compared to media participants for nearly all art forms, but especially in the case of television. Note that in the case of art collections, however, the income distributions of participants are approximately equal, suggesting that because of their low admission fees, there is no tendency for low income individuals to use television as a substitute.

Overall, we found live event-media substitution effects due to cost barriers to be relatively minor. A likely factor in this finding is also, of course, that arts events and activities in all the SPA survey categories can very often be enjoyed live for free or for nominal prices by those willing to seek them out.

3. Age and Other Potential Obstacles

Advanced age, physical handicaps and the presence of children are among a number of other potential reasons that an individual interested in the arts might choose to substitute media use for live attendance. In the case of age, our regression results reported in the appendix show a tendency for older individuals to substitute television use for live participation, but only questionably so in the case of recordings, and in fact just the opposite in the case of radio. To supplement our regression results, we replicated the analysis of the "Not available" barrier presented in Tables 20 and 21 above for each of the 15 other perceived barriers presented on the questionnaire (Version 1, questions 11a-b). That is, we compared the media use by those who did perceive the barrier with the media use by those who did not. In all 16 cases, however, we found no tendency for those who did perceive a barrier to live attendance to rely on media any more than those who did not perceive that barrier.

Finally, we report a finding of our Appendix B analysis already suggested by a number of the statistical tables we have presented. Education level was by far the strongest and most consistent predictor of arts participation via live events and via

each one of the three survey media. The positive effects of education level on participation dominated the relatively mild live event-media substitution effects with respect to income and age which we have reported above.

V. CONCLUSIONS AND SPECULATIONS

How can we summarize and reconcile our findings about the role of the media in extending the reach of the arts? The unquestioned benefits of the media as a window into art musueums and onto the stages of world-class arts productions are confirmed by our data showing audience reaches several times greater for media than for live activities for most of the SPA art forms. Media have the further benefit of reaching many individuals who are older, who have lower incomes and education, and who are somewhat more likely to be non-white. In addition, we should not ignore the greater opportunities to enjoy the arts which media provide to those who also attend live arts events and activities.

The media provide other benefits to the arts themselves which we have not previously mentioned. Many arts institutions receive significant income from record and tape royalties, which expands their resources for live performances. Widespread media exposure of artists and arts organizations is also likely to encourage patronage of live performances by those artists or organizations. Conversely, a rousing performance by a jazz artist or by a symphony orchestra is widely believed to stimulate the sale of recordings by that artist or that orchestra. The SPA data base unfortunately does not permit us to investigate the extent of these complementary relationships.

The results we could obtain from the SPA data base, however, require us to qualify this bright picture of the media's role. While the media evidently make the arts more accessible to non-urban areas and to those who are older, have limited economic resources, or face other obstacles to live attendance, these groups on the whole take little advantage of this greater accessibility. In particular, the SPA survey

dispels any notion that those who find live participation out of their reach for one reason or another instead find satisfaction through avid media participation. The numbers of such individuals, while they undoubtedly exist, are apparently too few for a general survey of this kind to locate.

What are likely explanations for the limited degree to which the media appear to be viable substitutes for those who face obstacles to live attendance? One possible reason is that people do not find the quality of the arts experience which media offer to be comparable.

Some relevant suggestive data appear in Table 22. We see that relatively large percentages of those who reported live attendance in the past year, as well as those who reported live attendance at least once in the past month (which we label as "frequent" attenders), have not used media to participate in the same art form at all in the past year. In some cases, relative inaccessibility or obscurity of certain art forms on media, such as musical stage plays on radio and records, is clearly a factor. Cost or availability may be factors in both radio and recording use as well.

Of particular interest, perhaps, are the relatively large proportions of live audiences who report essentially never watching performing arts or visual arts programs on television, in spite of the steady supply of these programs available for free to nearly all households in the U.S. One interpretation of these data is that these individuals do not find participating in the SPA art forms on television a satisfying experience.

Movies and sports offer a perspective. Market research in the movie industry confirms that a large segment of the population, particularly middle-aged and older adults, prefer to avoid movie theaters and watch at home. The birds-eye views and video magic of televised sports offers obvious advantages which are confirmed by the huge ratings for many events.

Table 22

Live Attenders Who are Non-Media Participants
1982

Activity	The percentage of live attenders who did NOT participate in the same art form at least once in the past year.	
	All Live Attenders[1]	"Frequent" Attenders[2]
Television		
Jazz	49%	47%
Classical Music	37	35
Opera	45	29
Musical Stage Play	56	58
Non-Musical Stage Play	43	45
Ballet	41	36
Art Collections	52	48
Radio		
Jazz	43	38
Classical Music	45	41
Opera	54	42
Musical Stage Play	92	93
Non-Musical Stage Play	89	86
Records		
Jazz	35	31
Classical Music	34	35
Opera	54	32
Musical Stage Play	76	80

1. Those who participated at least once in the past year.
2. Those who participated at least once in the past month.

What is the possibility that technologies such as hi-fi stereo sound and High Definition Television will eventually increase media audiences for the arts by bringing the television experience closer to the live experience with better sound and larger, clearer pictures? The potential audiences, of course, are confined to the relatively small proportions of adults who are interested, and limited as well as by the not inconsiderable expense of consumer hardware featuring such technologies. And one can only speculate on the long term effects of these technologies because they change the nature of the viewing experience. There is nevertheless every reason to believe that improved audio and video technologies for television can help improve the response to arts programming on the one medium which should have the greatest potential to replicate the live arts experience.

ENDNOTES

1. Values for Cronbach's alpha, a statistical test of index "reliability" support our use of the indices. Values for the television index were .79, .60 for the radio index, .63 for the recordings index, and .85 for the index of all media. For an exposition of Cronbach's alpha, see Bornstedt (1970).
2. The correlation between the radio diversity index and average TV hours was -.040 and not statistically significant from zero. Between the recordings diversity index and average TV hours the correlation was -.060 and significantly different from zero at the 95% confidence level.
3. The correlation between the television diversity index and average TV hours was -.006 and insignificantly different from zero.
4. To an extent, of course, live presentations, recordings, radio performances, or television performances are distinct art forms in themselves. A production of Shakespeare for television, for example, may be performed quite differently from a production for the live stage. Other works, from radio plays to television miniseries, may be nontransferable to the live stage or to other media. In discussing media or live performance as different vehicles for delivering the arts to consumers, we abstract from these distinctions and regard media programs or live events simply as alternative vehicles, or delivery systems, for the same basic art forms as defined in the survey.
5. In 1982-83, the Public Broadcast System transmitted approximately 35 hours of "cultural" programming per week to local stations, though stations in rural areas apparently clear fewer of these programs than do urban stations (Waterman, 1986). The 98% household penetration of public television is apparently based on the A.C. Nielsen metered household samples, but subjectively; a household is deemed capable of receiving a given station if a Nielsen observer determines the quality of reception is sufficiently high.

6. Cable television networks, such as Arts & Entertainment and BRAVO, offer arts programming in the SPA survey categories at least for part of their schedules. Nationwide viewing levels for these programs are miniscule, however, compared to those of public television.

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APPENDIX A

SURVEY OF PUBLIC PARTICIPATION IN THE ARTS

Questionnaire

Research Division
July 9, 1986

SURVEY OF PUBLIC PARTICIPATION IN THE ARTS, 1982 AND 1985

Months of 1982 or 1985 in Which Each Questionnaire Version Was Used

		Special Questionnaire Versions						
	Basic 10 Participation Questions	1 Barriers	2 Socialization	3 Recreation Life Style	4 Location of Participation	4 Music Preference	5 Other Participation	6 Media Participation
January	82/85	82/85						
February	82/85		82/85					
March	82/85			82/85				
April	82/85				82/85	82/85		
May	82/85						82/85	
June	82/85							82/85
July	82	82						
August	82		82					
September	82			82				
October	82				82	82		
November	82	82	82	82	82	82	82	82
December	82	82	82	82	82	82	82	82

The monthly samples in 1982 were about 1,500. In 1985, they were about 2,500.

Research Division
July 9, 1986

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SURVEY OF PUBLIC PARTICIPATION IN THE ARTS

Questionnaire

Basic 10 Participation Questions Asked Each Month

Jan-Dec 1982 and Jan-Jun 1985

► INTERVIEWER – Ask LAS-1 if respondent is 18 years of age or older.

INTRODUCTION – Now I have some questions about your leisure activities. The Bureau of the Census is collecting this information for the National Endowment for the Arts. *(Hand respondent the Privacy Act Statement LAS-13. If PHONE INTERVIEW END INTRODUCTION.)* **This explains the legal authority for conducting this survey. It also explains that the survey is voluntary and all information provided will be used for statistical purposes only. Your cooperation is extremely important to help ensure the completeness and accuracy of this needed information.**

1 The following questions are about YOUR activities during the LAST 12 months – –between _____ 1, 19___ and _____ ___, 19 ___.

During the LAST 12 MONTHS, did YOU go to a live jazz performance?

0 ☐ No

Yes – **How many times did you do this LAST MONTH – – between _____ 1, and _____ ___, 19___ ?**

1 ☐ None
2 ☐ One
3 ☐ 2 – 3
4 ☐ 4 – 5
5 ☐ 6 or more

2. (During the LAST 12 MONTHS,) Did you go to a live classical music performance? This includes choral music and instrumental or vocal recitals, as well as symphony and chamber music.

0 ☐ No

Yes – **How many times did you do this LAST MONTH ?**

1 ☐ None
2 ☐ One
3 ☐ 2 – 3
4 ☐ 4 – 5
5 ☐ 6 or more

3. (During the LAST 12 MONTHS,) Did you go to a live opera?

0 ☐ No

Yes – **How many times did you do this LAST MONTH ?**

1 ☐ None
2 ☐ One
3 ☐ 2 – 3
4 ☐ 4 – 5
5 ☐ 6 or more

4. (During the LAST 12 MONTHS,) Did you go to a live musical stage play or an operetta? Do not include grade school or high school productions.

0 ☐ No

Yes – **How many times did you do this LAST MONTH ?**

1 ☐ None
2 ☐ One
3 ☐ 2 – 3
4 ☐ 4 – 5
5 ☐ 6 or more

5. (During the LAST 12 MONTHS,) Did you go to a live performance of a non-musical stage play? Do not include grade school or high school productions.

0 ☐ No

Yes – **How many times did you do this LAST MONTH ?**

1 ☐ None
2 ☐ One
3 ☐ 2 – 3
4 ☐ 4 – 5
5 ☐ 6 or more

6. (During the LAST 12 MONTHS,) Did you go to a live ballet performance?

0 ☐ No

Yes – **How many times did you do this LAST MONTH ?**

1 ☐ None
2 ☐ One
3 ☐ 2 – 3
4 ☐ 4 – 5
5 ☐ 6 or more

7. (During the LAST 12 MONTHS,) Did you visit an ART gallery or an ART museum?

0 ☐ No

Yes – **How many times did you do this LAST MONTH ?**

1 ☐ None
2 ☐ One
3 ☐ 2 – 3
4 ☐ 4 – 5
5 ☐ 6 or more

8a. (During the LAST 12 MONTHS,) Did you play a musical instrument in a public performance or rehearse for a public musical performance?

0 ☐ No – Skip to 9a
1 ☐ Yes

8b. Did you play any classical music?

0 ☐ No 1 ☐ Yes

8c. Did you play any jazz?

0 ☐ No 1 ☐ Yes

9a. (During the LAST 12 MONTHS,) Did you act, sing, or dance in a public performance or rehearse for a public performance?

0 ☐ No – Skip to 10
1 ☐ Yes

9b. Did you act in a non-musical role?

0 ☐ No 1 ☐ Yes

9c. Did you sing in a musical play or operetta?

0 ☐ No 1 ☐ Yes

9d. Did you sing in an opera?

0 ☐ No 1 ☐ Yes

9e. Did you dance in a ballet performance?

0 ☐ No 1 ☐ Yes

10. (During the LAST 12 MONTHS,) Did you read novels, short stories, poetry, or plays?

0 ☐ No 1 ☐ Yes

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VERSION 1 – BARRIERS TO PARTICIPATION

11a. PERSONAL INTERVIEW ▶ **Please look at this card. (Show flashcard LAS-10.) Few people can do everything they would like to do. But if you could do any of the things listed on this card as often as you wanted, which ones would you do more often than you have DURING THE LAST 12 MONTHS?**

TELEPHONE INTERVIEW ▶ **I'm going to read you a list of things that some people like to do. Attend – – (Read categories from flashcard LAS-10.) Few people can do everything they would like to do. But if you could do any of these things as often as you wanted, which ones would you do more often than you have DURING THE LAST 12 MONTHS? I'll read the list again.**

(Mark all that apply, then ask 11b for each marked category.)

1 ☐ Jazz music performances – *Go to column 1 and ask 11b.*
2 ☐ Classical music performances – *Go to column 2 and ask 11b.*
3 ☐ Operas – *Go to column 3 and ask 11b.*
4 ☐ Musical plays, operettas – *Go to column 4 and ask 11b.*
5 ☐ Non-musical plays – *Go to column 5 and ask 11b.*
6 ☐ Ballet performances – *Go to column 6 and ask 11b.*
7 ☐ Art galleries or art museums – *Go to column 7 and ask 11b.*
8 ☐ None of these – *END INTERVIEW*

Column 1 – JAZZ	Column 2 – CLASSICAL	Column 3 – OPERAS	Column 4 – MUSICALS
11b. What are the reasons you did not attend JAZZ MUSIC PERFORMANCES more often? Any other reason? (Mark all that apply.)	**11b. What are the reasons you did not attend CLASSICAL MUSIC PERFORMANCES more often? Any other reason? (Mark all that apply.)**	**11b. What are the reasons you did not attend OPERAS more often? Any other reason? (Mark all that apply.)**	**11b. What are the reasons you did not attend MUSICAL PLAYS/ OPERETTAS more often? Any other reason? (Mark all that apply.)**
1 ☐ Tickets sold out	1 ☐ Tickets sold out	1 ☐ Tickets sold out	1 ☐ Tickets sold out
2 ☐ Cost	2 ☐ Cost	2 ☐ Cost	2 ☐ Cost
3 ☐ Not available	3 ☐ Not available	3 ☐ Not available	3 ☐ Not available
4 ☐ Feel uncomfortable	4 ☐ Feel uncomfortable	4 ☐ Feel uncomfortable	4 ☐ Feel uncomfortable
5 ☐ Don't have anyone to go with	5 ☐ Don't have anyone to go with	5 ☐ Don't have anyone to go with	5 ☐ Don't have anyone to go with
6 ☐ Babysitter problems/Must care for children	6 ☐ Babysitter problems/Must care for children	6 ☐ Babysitter problems/Must care for children	6 ☐ Babysitter problems/Must care for children
7 ☐ Problem related to a handicap	7 ☐ Problem related to a handicap	7 ☐ Problem related to a handicap	7 ☐ Problem related to a handicap
8 ☐ Problem related to age/health	8 ☐ Problem related to age/health	8 ☐ Problem related to age/health	8 ☐ Problem related to age/health
9 ☐ Too far to go	9 ☐ Too far to go	9 ☐ Too far to go	9 ☐ Too far to go
10 ☐ Transportation/Traffic/Parking problems	10 ☐ Transportation/Traffic/Parking problems	10 ☐ Transportation/Traffic/Parking problems	10 ☐ Transportation/Traffic/Parking problems
11 ☐ Crime or fear of crime	11 ☐ Crime or fear of crime	11 ☐ Crime or fear of crime	11 ☐ Crime or fear of crime
12 ☐ Poor quality/Not very good, etc.	12 ☐ Poor quality/Not very good, etc.	12 ☐ Poor quality/Not very good, etc.	12 ☐ Poor quality/Not very good, etc.
13 ☐ Prefer to watch TV	13 ☐ Prefer to watch TV	13 ☐ Prefer to watch TV	13 ☐ Prefer to watch TV
14 ☐ Don't have time	14 ☐ Don't have time	14 ☐ Don't have time	14 ☐ Don't have time
15 ☐ Procrastination/Lack of motivation	15 ☐ Procrastination/Lack of motivation	15 ☐ Procrastination/Lack of motivation	15 ☐ Procrastination/Lack of motivation
16 ☐ Other – *Specify* _____	16 ☐ Other – *Specify* _____	16 ☐ Other – *Specify* _____	16 ☐ Other – *Specify* _____

Column 5 – NON-MUS. PLAYS	Column 6 – BALLET	Column 7 – ART GALLERIES	NOTES
11b. What are the reasons you did not attend NON-MUSICAL PLAYS more often? Any other reason? (Mark all that apply.)	**11b. What are the reasons you did not attend BALLET PERFORMANCES more often? Any other reason? (Mark all that apply.)**	**11b. What are the reasons you did not attend ART GALLERIES/ART MUSEUMS more often? Any other reason? (Mark all that apply.)**	
1 ☐ Tickets sold out	1 ☐ Tickets sold out	1 ☐ Tickets sold out	
2 ☐ Cost	2 ☐ Cost	2 ☐ Cost	
3 ☐ Not available	3 ☐ Not available	3 ☐ Not available	
4 ☐ Feel uncomfortable	4 ☐ Feel uncomfortable	4 ☐ Feel uncomfortable	
5 ☐ Don't have anyone to go with	5 ☐ Don't have anyone to go with	5 ☐ Don't have anyone to go with	
6 ☐ Babysitter problems/Must care for children	6 ☐ Babysitter problems/Must care for children	6 ☐ Babysitter problems/Must care for children	
7 ☐ Problem related to a handicap	7 ☐ Problem related to a handicap	7 ☐ Problem related to a handicap	
8 ☐ Problem related to age/health	8 ☐ Problem related to age/health	8 ☐ Problem related to age/health	
9 ☐ Too far to go	9 ☐ Too far to go	9 ☐ Too far to go	
10 ☐ Transportation/Traffic/Parking problems	10 ☐ Transportation/Traffic/Parking problems	10 ☐ Transportation/Traffic/Parking problems	
11 ☐ Crime or fear of crime	11 ☐ Crime or fear of crime	11 ☐ Crime or fear of crime	
12 ☐ Poor quality/Not very good, etc.	12 ☐ Poor quality/Not very good, etc.	12 ☐ Poor quality/Not very good, etc.	
13 ☐ Prefer to watch TV	13 ☐ Prefer to watch TV	13 ☐ Prefer to watch TV	
14 ☐ Don't have time	14 ☐ Don't have time	14 ☐ Don't have time	
15 ☐ Procrastination/Lack of motivation	15 ☐ Procrastination/Lack of motivation	15 ☐ Procrastination/Lack of motivation	
16 ☐ Other – *Specify* _____	16 ☐ Other – *Specify* _____	16 ☐ Other – *Specify* _____	
		END INTERVIEW	

11a. The following questions are about lessons or classes you may have taken at any time in your life.

Have you EVER taken lessons or a class in music – – either voice training or playing an instrument?

2 ☐ No

Yes – **Did you take these lessons when you were – –**

(Mark all that apply.)

1 ☐ **Less than 12 years old?**
2 ☐ **12 – 17 years old?**
3 ☐ **18 – 24 years old?**
4 ☐ **25 or older?**

b. (Have you EVER taken lessons or a class) in visual arts such as sculpture, painting, print making, photography, film making, etc.?

0 ☐ No

Yes – **Did you take these lessons when you were – –**

(Mark all that apply.)

1 ☐ **Less than 12 years old?**
2 ☐ **12 – 17 years old?**
3 ☐ **18 – 24 years old?**
4 ☐ **25 or older?**

c. (Have you EVER taken lessons or a class) in acting or theater?

0 ☐ No

Yes – **Did you take these lessons when you were – –**

(Mark all that apply.)

1 ☐ **Less than 12 years old?**
2 ☐ **12 – 17 years old?**
3 ☐ **18 – 24 years old?**
4 ☐ **25 or older?**

d. (Have you EVER taken lessons or a class) in ballet?

0 ☐ No

Yes – **Did you take these lessons when you were – –**

(Mark all that apply.)

1 ☐ **Less than 12 years old?**
2 ☐ **12 – 17 years old?**
3 ☐ **18 – 24 years old?**
4 ☐ **25 or older?**

e. (Have you EVER taken lessons or a class) in creative writing?

2 ☐ No

Yes – **Did you take these lessons when you were – –**

(Mark all that apply.)

1 ☐ **Less than 12 years old?**
2 ☐ **12 – 17 years old?**
3 ☐ **18 – 24 years old?**
4 ☐ **25 or older?**

f. (Have you EVER taken lessons or a class) in pottery, leatherwork, weaving, woodworking, or any other craft-art?

2 ☐ No

Yes – **Did you take these lessons when you were – –**

(Mark all that apply.)

1 ☐ **Less than 12 years old?**
2 ☐ **12 – 17 years old?**
3 ☐ **18 – 24 years old?**
4 ☐ **25 or older?**

g. (Have you EVER taken a class) in art appreciation or art history?

2 ☐ No

Yes – **Did you take these lessons when you were – –**

(Mark all that apply.)

1 ☐ **Less than 12 years old?**
2 ☐ **12 – 17 years old?**
3 ☐ **18 – 24 years old?**
4 ☐ **25 or older?**

h. (Have you EVER taken a class) in music appreciation?

0 ☐ No

Yes – **Did you take these lessons when you were – –**

(Mark all that apply.)

1 ☐ **Less than 12 years old?**
2 ☐ **12 – 17 years old?**
3 ☐ **18 – 24 years old?**
4 ☐ **25 or older?**

CHECK ITEM A

Are either of respondent's parents present? If not, skip to 13a – 13b.

2 ☐ No
1 ☐ Yes } *Ask 12a*

12a. The following questions are about activities in the home when you were growing up.

Did your parents – – or other adult members of the household – – listen to classical music or opera often, occasionally, or never?

1 ☐ Often
2 ☐ Occasionally
3 ☐ Never

b. Take you to art museums or galleries often, occasionally, or never?

1 ☐ Often
2 ☐ Occasionally
3 ☐ Never

c. Take you to plays, dance or classical music performances (often, occasionally, or never)?

1 ☐ Often
2 ☐ Occasionally
3 ☐ Never

d. Encourage you to read books which were not required for school or religious studies (often, occasionally, or never)?

1 ☐ Often
2 ☐ Occasionally
3 ☐ Never

CHECK ITEM B

Look at Control Card: items 13a, b, and c to determine whether respondent's parents are household members.

1 ☐ *Neither parent is household member – Read* (A) *and ASK 13a and 13b*

3 ☐ *Both parents are household members – Transcribe father's education to 13a and mother's education to 13b based on cc 21 and 22. END INTERVIEW.*

2 ☐ *Only father is a household member – Read* (A) *and ASK 13b. Transcribe father's education to 13a from cc 21 and 22.*

4 ☐ *Only mother is a household member – Read* (B) *and ASK 13a. Transcribe mother's education to 13b based on cc 21 and 22.*

(A) **Now I'd like to ask you a question about your parent's education. This information, along with the other information in this survey, will be used to study the relationship between these things and participation in the arts.**

13a. What is the highest grade (or year) of regular school your FATHER completed?

1 ☐ 7th grade or less
2 ☐ 8th grade
3 ☐ 9th – 11th grades
4 ☐ 12th grade
5 ☐ College (did not complete)
6 ☐ Completed college (4+ years)
7 ☐ Don't know

b. What is the highest grade (or year) of regular school your MOTHER completed?

1 ☐ 7th grade or less
2 ☐ 8th grade
3 ☐ 9th – 11th grades
4 ☐ 12th grade
5 ☐ College (did not complete)
6 ☐ Completed college (4+ years)
7 ☐ Don't know

END THIS LAS INTERVIEW

NOTES

11a. During the LAST 12 MONTHS, did YOU go out to the movies?
- 2 = No
- 1 = Yes

b. Did you go to any sports events at all? Include both professional and amateur sports events, regardless of whether an admission fee was charged.
- 2 = No
- 1 = Yes

c. Did you visit a zoo, arboretum, or botanical garden?
- 2 = No
- 1 = Yes

d. Did you play card games, board games, electronic games, pinball, or any other similar games?
- 2 = No
- 1 = Yes

e. During the LAST 12 MONTHS, did you go to an amusement or theme park, a carnival, or a similar place of entertainment?
- 2 = No
- 1 = Yes

f. Did you jog, lift weights, walk, or participate in any other exercise program?
- 2 = No
- 1 = Yes

g. Did you participate in any sports activity, such as softball, basketball, golf, bowling, skiing, tennis, or the like?
- 2 = No
- 1 = Yes

11h. Did you do any camping, hiking, canoeing, or any other similar outdoor activity?
- 2 = No
- 1 = Yes

i. During the LAST 12 MONTHS, did you read books or magazines?
- 2 = No
- 1 = Yes

j. Did you do volunteer or charity work?
- 2 = No
- 1 = Yes

k. Did you work on a collection such as stamps, coins, shells, or the like?
- 2 = No
- 1 = Yes

l. Did you prepare special gourmet meals for the pleasure of doing it?
- 2 = No
- 1 = Yes

m. Did you make repairs or improvements on your own home or motor vehicles?
- 2 = No
- 1 = Yes

n. Did you work with indoor plants or do any gardening for pleasure?
- 2 = No
- 1 = Yes

END THIS LAST INTERVIEW

NOTES

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Item 1 – Jazz performances
Item 2 – Classical music performances
Item 3 – Operas
Item 4 – Musical plays
Item 5 – Non-musical plays
Item 6 – Ballets

11 Read:

► FOR PERSONAL INTERVIEW

Please look at the kinds of places listed on this card. *Hand respondent flashcard LAS-11.* **Thinking back to the _____ (and) _____, (and), etc., you attended during the LAST 12 MONTHS, in which kinds of places were these performances held? Any other kind of place?** *Mark all that apply.*

► FOR TELEPHONE INTERVIEW

I'm going to read you a list of the kinds of places where performances are held. *Read categories from flashcard LAS-11.* **Thinking back to the _____, (and), _____, (and), etc., you attended during the LAST 12 MONTHS, in which kinds of places were these performances held? Any other kind of place?** *Mark all that apply.*

1 ☐ College facility
2 ☐ Elementary or high school facility
3 ☐ Church, synagogue, mosque, or other facility associated with a religious organization
4 ☐ The Y – YMCA, YWCA, YMHA, YWHA
5 ☐ Concert hall, opera house, or auditorium
6 ☐ Theater or dinner theater
7 ☐ Night club or coffee house
8 ☐ Library
9 ☐ Museum or art gallery
10 ☐ Park or other open air facility
11 ☐ Other – *Specify* _____

12a Read:

► FOR PERSONAL INTERVIEW

Please look at the types of music listed on this card. *Hand respondent flashcard LAS-12.* **Which of these types of music do you like to listen to? Any other type?** *Mark all that apply.*

► FOR TELEPHONE INTERVIEW

I'm going to read you a list of some types of music. As I read the list, tell me which of these types of music you like to listen to? *Read categories from flashcard LAS-12.* **Any other type?** *Mark all that apply.*

1 ☐ Classical/Chamber music
2 ☐ Opera
3 ☐ Operetta/Broadway musicals/Show tunes
4 ☐ Jazz
5 ☐ Soul/Blues/Rhythm and blues
6 ☐ Big band
7 ☐ Country/western
8 ☐ Bluegrass
9 ☐ Rock
10 ☐ Mood/Easy listening
11 ☐ Folk
12 ☐ Barbershop
13 ☐ Hymns/Gospel
14 ☐ Other – *Specify* _____
15 ☐ All
16 ☐ None/Don't like to listen to music

CHECK ITEM B1C

More than one type of music or "ALL" marked in 12a?
☐ No – *END INTERVIEW*
☐ Yes

12b. **You mentioned you like to listen to** *Read categories marked in 12a.* **Which of these do you like best?**
Enter category number.

_ _ Category number
☐ No one type best

END THIS LAS INTERVIEW

NOTES

11. During the LAST 12 MONTHS, did you visit a science museum, natural history museum, or the like?
0 ☐ No
1 ☐ Yes

12. (During the LAST 12 MONTHS,) Did you visit an historic park or monument, or tour buildings, or neighborhoods for their historic or design value?
0 ☐ No
1 ☐ Yes

13. (During the LAST 12 MONTHS,) Did you read, or listen to a reading, of poetry?
0 ☐ No
1 ☐ Yes

14. (During the LAST 12 MONTHS,) Did you visit an art or craft fair or festival?
0 ☐ No
1 ☐ Yes

15. (During the LAST 12 MONTHS,) Did you take lessons or a class in literature, creative writing, art, photography, craft arts, ballet, music, or the like?
0 ☐ No
1 ☐ Yes

16. (During the LAST 12 MONTHS,) Did you work with pottery, ceramics, jewelry, or do any leatherwork, metalwork, or similar crafts?
0 ☐ No
1 ☐ Yes

17. During the LAST 12 MONTHS, did you do any weaving, crocheting, quilting, needlepoint, sewing, or similar crafts?
0 ☐ No
1 ☐ Yes

18. (During the LAST 12 MONTHS,) Did you do any work on a musical or non-musical play, an opera, or a ballet production? Include working on lights, sets, costumes, promotion, etc., but not performing.
0 ☐ No
1 ☐ Yes

19. (During the LAST 12 MONTHS,) Did you do any work on a jazz or classical music performance? Include working o lights, sets, promotion, etc., but not performing.
0 ☐ No
1 ☐ Yes

20. (During the LAST 12 MONTHS,) Did you work on any creative writings such as stories, poems, plays, and the like? Exclude any writing done as part of a course requirement.
0 ☐ No
1 ☐ Yes

21. (During the LAST 12 MONTHS,) Did you make photographs, movies, or video tapes as an artistic activity?
0 ☐ No
1 ☐ Yes

22. (During the LAST 12 MONTHS,) Did you do any painting, drawing, sculpture, or printmaking activities?
0 ☐ No
1 ☐ Yes

END THIS LAS INTERVIEW

NOTES

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VERSION 6 – MEDIA PARTICIPATION

11. **Approximately how many hours of television do you watch on an average day?**

_____ Number of hours

0 ☐ None/don't watch television

12a. **During the LAST 12 MONTHS, did you watch a jazz performance on television?**

0 ☐ No
1 ☐ Yes

b. **(During the LAST 12 MONTHS,) Did you listen to a jazz program on radio?**

0 ☐ No
1 ☐ Yes

c. **(During the LAST 12 MONTHS,) Did you listen to jazz records or tapes?**

0 ☐ No
1 ☐ Yes

13a. **During the LAST 12 MONTHS, did you watch a classical music performance on television?**

0 ☐ No
1 ☐ Yes

b. **(During the LAST 12 MONTHS,) Did you listen to a classical music program on radio?**

0 ☐ No
1 ☐ Yes

c. **(During the LAST 12 MONTHS,) Did you listen to classical music records or tapes?**

0 ☐ No
1 ☐ Yes

14a. **During the LAST 12 MONTHS, did you watch an opera on television?**

0 ☐ No
1 ☐ Yes

b. **(During the LAST 12 MONTHS,) Did you listen to an opera music program on radio?**

0 ☐ No
1 ☐ Yes

14c. **(During the LAST 12 MONTHS,) Did you listen to opera music records or tapes?**

0 ☐ No
1 ☐ Yes

15a. **During the LAST 12 MONTHS, did you watch a musical stage play or an operetta on television? Exclude movie versions of musical plays and operettas**

0 ☐ No
1 ☐ Yes

b. **(During the LAST 12 MONTHS,) Did you listen to a musical stage play or an operetta on radio?**

0 ☐ No
1 ☐ Yes

c. **(During the LAST 12 MONTHS,) Did you listen to a musical stage play or an operetta on records or tapes?**

0 ☐ No
1 ☐ Yes

16a. **During the LAST 12 MONTHS, did you watch a non-musical stage play on television? Do not include movies, situation comedies, or TV series.**

0 ☐ No
1 ☐ Yes

b. **(During the LAST 12 MONTHS,) Did you listen to a radio performance of a non-musical stage play?**

0 ☐ No
1 ☐ Yes

17. **(During the LAST 12 MONTHS,) Did you watch a ballet program on television?**

0 ☐ No
1 ☐ Yes

18. **During the LAST 12 MONTHS, did you watch a television program dealing with art galleries or things in art museums?**

0 ☐ No
1 ☐ Yes

END THIS LAST INTERVIEW

NOTES

APPENDIX B

COMPARATIVE DEMOGRAPHIC AND GEOGRAPHIC DETERMINANTS OF ARTS ATTENDANCE AND MEDIA USE: PRELIMINARY REGRESSSION RESULTS

In this appendix, we report selected single equation ordinary least squares regressions which support the text discussion of Section IV about the interrelationships of live with media arts audiences. Our objective is to investigate how basic audience demographic and geographic characteristics determine arts participation in live events and activities compared to how the same characteristics determine arts participation via the three different survey media of television, radio and recordings. From these comparisons, we draw inferences about the extent to which media serve to reduce certain hypothesized barriers to live attendance and about the substitutability of media for live attendance.

I. BASIC DEMOGRAPHIC AND GEOGRAPHIC PREDICTORS COMPARED

A. Method

We compare ordinary least squares regression results for five separate equations.

1. Dependent Variables

We define five different index variables, in which one point is credited for each one of the seven core art forms in which the respondent reported participation at least once during the past year, as follows:

ATTINDEX: live participation (0-7)

TVINDEX: television participation (0-7)

RADINDEX: radio participation (0-5)

RECINDEX: recording participation (0-4)

MINDEX: all media participation (0-16: TVINDEX + RADINDEX + RECINDEX)

Note that for radio and recording participation, questions were included only for 5 and 4 of the 7 core art forms, respectively. In general, we assume these indices to

be indicators not only of an individual's diversity of participation in different art forms, but of the individual's general frequency of live or media participation. For a discussion of this point, see pages 15-16 of the text.

2. Independent Variables

In order to correspond with the cross-tabulations and discussion in the main text, only the following six basic demographic and geographic variables are included. Although five of the six are categorical variables, each of these is defined to take full advantage of the relatively detailed breakdowns used in the Census Bureau's coding of the responses:

AGE: A continuous variable ranging from 18 to 96.

INCOME: 11 categories where Less than $3000 = 1 up to $50,000 or greater = 11.

EDUC (Education): 6 categories where Grade school only = 1 up to Graduate School = 6.

SEX: female = 1, male = 0

SMSA (location): Central city, SMSA = 3, SMSA, not central city = 2; Not in SMSA = 1

RACE: white, other = 1, black = 0

We initially regressed each of the five participation index variables on the same set of six independent variables. The indexing schemes for the independent variables are contrived so that for the ATTINDEX equation, signs are expected to be positive for all six: Higher incomes should permit greater live attendance and may also represent a socialization or status factor, in that those with higher income may face greater social pressures to participate in the arts. Higher education is hypothesized to increase appreciation of the arts. Mean age may have a positive or negative effect; on the one hand, younger adults go out more, but interest in many of the SPA art forms may increase with age. With respect to sex, the conventional

wisdom widely regards females to have greater interest in the arts than men. For the race variable as defined, our hypothesis is that the dominance of arts in the European tradition among the seven SPA art forms would lead to relatively lower rates of penetration among blacks overall. Finally, we hypothesize that adults in more urbanized locations should find the live arts more accessible.

With respect to arts participation via media, we have no prior expectation that the effects of education, race or sex should be any different than they are for live attendance, to the extent that these variables determine only fundamental interest in the relevant art forms and not the means by which participation takes place. Our primary hypotheses with respect to media participation are as follows: (1) Participation in the arts via relatively inexpensive or free delivery systems (ie,. especially television and radio) should be relatively unaffected by income levels (except to the degree income is a positive socialization or status factor); (2) Relatively greater accessibility of media actitivities in non-ruban areas should reduce or eliminate the effects of geographic locations (SMSA) on media participation; (3) Media should be relatively more attractive than live participation as age increases. With respect to all three hypotheses, we do not rule out the possibility that greater income, more urban location and lower age levels might actually have negative effects on media participation. This would occur if live-media substitution effects are sufficiently strong. (See text discussion, page 33).

B. Results and Discussion

As indicated by the R^2 values, the explanatory power of all five regression equations in Table B1 is very low. Among those factors contributing to low explanatory power is the use of categorical rather than continuous data. The combination of a somewhat diverse group of art forms into single indices can also be expected to reduce explanatory power to the extent the different independent variables have differing effects for different art forms. Undoubtedly the greatest

weakness is the explanatory power of these equations is the complete absence of any variable (eg, socialization by parents or schools) which would motivate the individual to have some particular interest in any one of the art forms.

As equation (1) shows, the effects of all six variables on the attendance index are positive and signficiant at the 95% level, as expected.

With respect to our media related hypotheses, the degree of urbanization appears to positively influence participation in all four media equations as well as the live participation equation. This offers no evidence that media effectively lower barriers to arts participation in non-urbanized areas, and suggests the unlikelihood of any significant live-media substitution effects which may result due the geographic location of potential participants.

With respect to income, the media equations produce mixed results. The income variable is positive and significant for recordings, but insignifcantly different from zero (at the 95% level) for either television or radio. These results are consistent with our hypothesis, indicating that at least television and radio reduce barriers to live attendance due to limited economic resources which potential participants may have. They do not indicate, however, any tendency for live-media substitution effects to be dominant.

All four media equations show positive coefficients for the age variable, although these effects are statistically questionable in the cases of radio and recordings. In the case of television, this may reflect the generally older demographic profile of viewers in general, but the results suggest that media are effective to some degree in lowering barriers which the physical demands of live attendance may impose on older adults.

Finally, we note that the variable with strongest and most consistent predictive power in all of the equations is education. This suggest that the education level of participants transcends any differences in the type of delivery system as a predictor

of participation in the arts. Results by sex are mixed, suggesting some tendency for women to engage in live attendance rather than media participation. Media participation variations by race are generally insignificant.

II. Direct Tests for Live-Media Substitution Effects

A. Method

We can directly investigate the extent to which barriers of geography, cost and age affect substitution between live and media participation by constructing the following new indices and regressing them on the same set of six independent variables.

$$ATTTVSUB = \frac{ATTINDEX}{7} - \frac{TVINDEX}{7}$$

$$ATRADSUB = \frac{ATTINDEX}{7} - \frac{RADINDEX}{5}$$

$$ATRECSUB = \frac{ATTINDEX}{7} - \frac{RECINDEX}{4}$$

$$ATMINSUB = \frac{ATTINDEX}{7} - \frac{MINDEX}{16}$$

Each of these indices ranges from -1 to +1 and is intended to measure how intensively the respondent pursues live attendance over media use, and vice versa. If low income adults tend to substitute television for live participation, for example, we would expect income to be postively related to ATTTVSUB, and similarly for SMSA in the case of location. If older individuals substitute media for attendance, we would expect the coefficient of age to be negative. Again, we make no prior assumptions about the signs of education, sex or race in these equations.

B. Results and Discussion

The R^2 coefficients for each of these equations (Table B2) are much closer to zero than the previous set, as we would expect to observe if live-media substitution effects are relatively less dominant than mutual determinants of both live and

media participation. The coefficient for SMSA is insignificantly different from zero in each case, indicating no evidence from this data base of any live-media substitution effects induced by location barriers. That the opposite effect might even prevail is suggested by the negative though statistically insignificant coefficient for SMSA in equation (6). Consistent with the results of equations (1) - (5) above, statistically significant substitution effects between live and media attendance due to income are evident only in the case of television (equation (6)). Similar results were obtained for age in the case of television, although an effect in the opposite direction is significant in the case of radio. In most cases, the tendency for women to engage in relatively more live attendance than media participation (and of course the opposite tendency for men), is confirmed. Finally, significant effects by education do appear in the cases of television and radio, for which we do not hazard an explanation.

Several additional steps in extending these preliminary results suggest themselves. One is to separate out the somewhat anomalous case of jazz, and in fact to produce all results by individual art form. Another is certainly to include other relevant explanatory factors from the questionnaire such as socialization. Finally, we must attempt a more realistic representation of the hypothesized live-media substitution effects process via a simultaneous equations model.

Table B1

Preliminary Regression Results: Determinants of Overall Live and Media Participation 1982 Data

			AGE	INCOME	EDUC	SEX	SMSA	RACE	Adjusted R^2
(1)	ATTINDEX	=	− .073* (4.07)	+ .047* (2.73)	+ .441* (24.15)	+ .093* (5.37)	+ .116* (6.66)	+ .035* (1.98)	.210
(2)	RADINDEX	=	+ .034 (1.74)	+ .015 (.79)	+ .262* (13.34)	− .033 (− 1.76)	+ .108* (5.74)	− .034 (1.80)	.082
(3)	RECINDEX	=	+ .036 (1.87)	+ .039* (2.16)	+ .336* (17.39)	+ .032 (1.77)	+ .078* (4.20)	− .004 (.24)	.177
(4)	TV INDEX	=	+ .123 (6.48)	− .010 (.57)	+ .336* (17.46)	+ .049* (2.70)	+ .108* (5.88)	+ .027 (1.47)	.122
(5)	MINDEX	=	+ .093* (4.94)	+ .004 (.23)	+ .371* (19.51)	+ .029 (1.61)	+ .117* (6.46)	+ .007 (.04)	.145

( ): Indicates absolute t-values.

*: Indicates significanse at the 95% confidence level.

Table B2

Preliminary Regression Results: Live-Media Substitution effects 1982 Data

			AGE	INCOME	EDUC	SEX	SMSA	RACE	Adjusted R^2
(6)	ATTTVSUB	=	− .081* (4.04)	+ .046* (2.38)	− .041* (2.00)	+ .015 (.78)	− .036 (1.82)	− .003 (.18)	.001
(7)	ATTRADSUB	=	+ .040* (2.03)	+ .022 (1.15)	+ .165* (8.20)	+ .114 (5.98)	+ .010 (.52)	+ .064* (3.31)	.043
(8)	ATTRECSUB	=	+ .021 (1.02)	− .008 (− .39)	+ .001 (.04)	+ .044* (2.24)	+ .007 (.35)	+ .032 (1.59)	.003
(9)	ATTMINSUB	=	− .028 (1.40)	+ .032 (1.64)	+ .031 (1.52)	+ .058* (3.00)	− .018 (.94)	+ .027 (1.38)	.008

( ): Indicates absolute t-values.

*: Indicates significanse at the 95% confidence level.